Initial Response to the Liberty Consulting Infrastructure Audit

August 30, 2004

Contents

1. Summary

In March 2004, NorthWestern Energy (NWE) engaged The Liberty Consulting Group (Liberty), an independent third-party engineering firm, to conduct an audit of NWE's electric and gas transmission and distribution operations in Montana. NorthWestern officials felt that an independent analysis of the Company's performance and maintenance practices, future capital requirements and the overall state of the electric and natural gas systems would contribute to a constructive dialogue about the integrity and reliability of the Company's infrastructure.

Liberty completed the audit in July and presented a final report to the Company and to the Montana Public Service Commission (MPSC). While Liberty concluded that NWE's operations are generally consistent with good utility practices, it listed 21 recommendations in specific operational areas, and made several suggestions on less important areas in which Liberty believed NWE could improve its operations. Specifically, Liberty noted weaknesses in the implementation of electric inspection and maintenance programs, the increasing frequency of electric service interruptions and duration of outages, and indications of spending levels that may be insufficient to maintain desirable levels of service quality. Liberty also advised that the Company consider steps to reduce the occurrences of cable failures and animal-caused outages, improve tree-trimming activities, and enhance compliance with inspection schedules.

Overall, NWE believes the report provides a good foundation for planning and provides an objective analysis that enables us to focus on appropriate, cost-effective measures that will provide additional reliability over time. This document serves as NWE's initial response to the findings and outlines the Operational Action Plan that we propose to use to address Liberty's recommendations for improvement. Specific measures will follow at a later date as we absorb the recommendations into our annual planning cycle.

NorthWestern Energy
Utility Operations and Maintenance
and Liberty Audit
Operational Action Plan Framework

Jun/Jul 04	Distribution operations completes comprehensive staffing analysis of front line supervision and engineering staff. – This study has exposed gaps in certain areas related to technical functions within operations. As a result 12 new engineering and estimator positions are currently posted and planned to be filled over the next couple of months. Gas Transmission also completes a field staffing and study.
Jul 04	Liberty Audit – Liberty Consulting Group completes Operational Audit initiated in March.
Jul 04	MPSC Audit Review and Notice of Action – NWE submits the report to the MPSC on July 8.

Jul/Aug 04	NWE Owner Assignment and Audit Review – Liberty Consulting presents report findings to the MPSC on July 20, and NWE initiates review of the report.
Jul/Dec 04	New Distribution organization includes separate planning and engineering functions - Over the next 6 to 12 months several activities related to the Planning and Engineering functions will take place including revised Distribution Maintenance guidelines and Engineering standards, load modeling analysis on critical circuits, and a thorough performance review by circuit of reliability history and outage causes. These activities will drive the necessary studies required to properly respond in detail to several Liberty recommendations.
Jul/Dec 04	NWE conducts project analysis and includes: Engineering Prioritization Timing Available Funding
Aug /Dec 04	Transmission operations initiates comprehensive staffing analysis to evaluate supervision and engineering requirements and to identify gaps in technical areas.
Aug 04	NWE responds to Liberty Audit– NWE submits initial report to the MPSC on August 30.
Dec 04	Incorporate appropriate Liberty Audit recommendations into NWE's 2005 Annual Budgeting Cycle.
Dec 04	Finalize NWE's Operational Action Plan
Jan 05	Quarterly MPSC Activity Reports – Activity updates to the MPSC begin with review of fourth quarter 2004.

The following provides a summary of additional points that need to be considered as NWE develops its Operational Action Plan:

1) NorthWestern's aging utility infrastructure is not unique and is a condition common to the utility industry. Many companies are seeking cost-effective ways to come to grips with this reality.

2) While, as Liberty accurately notes, some recent reliability trends are of concern, our customer satisfaction surveys indicate of the majority of our customers remain satisfied with the current level of service they receive.

3) Some of the recommendations provided by Liberty are very complex in nature and require further analysis before we can commit to a specific action plan. The initial

responses to specific recommendations outlined in this document are meant to provide the MPSC with the process we intend to use to develop a final Operational Action Plan.

4) The Operational Action Plan is being developed at the same time that 2005 operating budgets and staffing levels are being prepared, reviewed and finalized. The items included in the final Operational Action Plan will be factored into the budget over time. This plan must be consistent with the five-year financial plan outlined in our approved Plan of Reorganization. It's likely, as in all budget prioritization processes, that not all items will be funded immediately.

5) Some of Liberty's recommendations require significant capital and operating expense outlays. NWE, with input from the Commission, Consumer Counsel and others, must evaluate whether the potential benefits justify the additional expense which would need to be recovered through rates. NorthWestern has not yet completed a full evaluation of multi-year infrastructure improvement and replacement programs, but anticipates they cannot be fully addressed without rate relief. When that evaluation is complete, options will be discussed with the MPSC and Consumer Counsel staff.

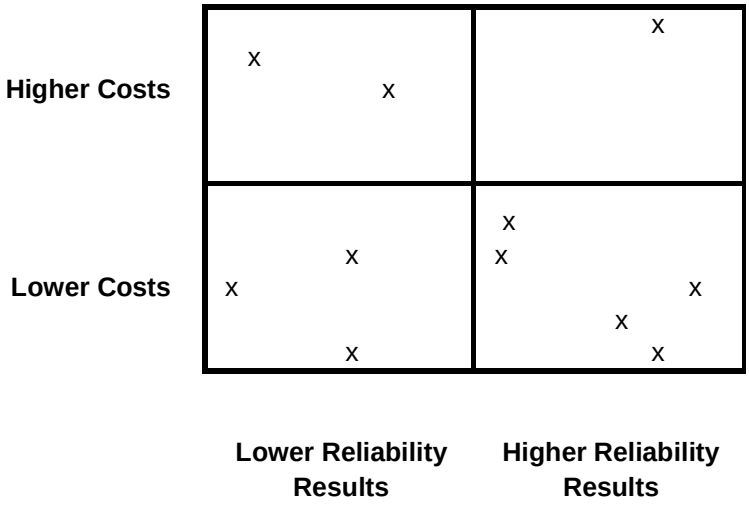
Following receipt of the Liberty report, the officers responsible for NWE's T&D operations designated an employee "Owner" for each recommendation. Each process owner has completed an initial review of their assigned recommendation, which includes a general response and rationale as to whether to "accept" or implement the recommendation without modifications, "accept" or implement with modifications or to conduct further study before determining whether to implement.

A preliminary schedule of those measures NWE currently agrees to implement is provided, together with an estimated cost range for each (where complete) and a reliability assessment. This information will then be used to prioritize the various items using a cost/reliability matrix.

The following illustrates the form of a matrix of this type:

ILLUSTRATIVE

Project Prioritization Matrix



Individual activity points will be charted to help assess and prioritize activities. In general, low cost, high reliability recommendations will be targeted first; low cost, low reliability recommendations will be targeted second; followed by high cost, high reliability recommendations. Finally, high cost, low reliability recommendations will be reviewed to determine whether they are cost-justified.

2. Discussion

This document provides our initial effort to identify the costs associated with the bulk of the recommendations, and notes the remaining recommendations that do not lend themselves to a quick cost estimate due to the need for further analysis.

In summary, of Liberty's 21 recommendations (two of which NWE has separated into additional recommendations), NWE accepts twelve, accepts seven with modification, and believes more study is necessary on the remaining four. Attached to this document is a breakdown of NWE's initial analysis, recommendation by recommendation.

Most of the accepted recommendations reinforce NWE's own internal analysis concerning the areas most in need of attention. Other recommendations can be accepted with relatively minor changes that permit conformity with organizational structure or better integration into our on-going operations. NWE's modifications are not intended to change the objective of Liberty's recommendations. NWE agrees with, and accepts, the objective of improving reliability by reducing outage frequency and duration. As noted, the scope of four of the recommendations is sufficiently extensive as to require further study to determine associated impacts on NWE and its customers.

Where NWE is already addressing a recommendation, that fact is noted. For example, staffing is being increased in several areas noted by Liberty as needing resources; processes are being documented and standardized; and the Company is catching up on previously deferred expenditures.

NWE estimates, on a very preliminary basis, that full implementation of all of the Liberty recommendations could require total capital expenditures in the range of $10 to $13 million and operating expenditures of $1.6 - $3 million in each of the next several years. These estimates are the result of NWE's initial high-level analysis and will change as we refine our action plan through additional study, analysis, planning and engineering.

Importantly, these are initial estimates and the net capital and maintenance costs including potential cost offsets through increased process/performance efficiencies are yet to be determined.

Of course, implementation of the Liberty recommendations must be incorporated into the Company's five-year financial forecasts as prescribed in our Plan of Reorganization. These targets are a critical component of emerging from bankruptcy and re-establishing a satisfactory credit rating that will allow NWE to operate under normal credit terms going forward. The ability to meet these financial targets is critically important to all our stakeholders; therefore, funding of the forthcoming Operational Action Plan must be considered in this context.

We believe that prioritization and timing of NWE actions can, over time, accommodate both NWE's day-to-day operations and the implementation of the recommendations of the Liberty Report. However, NWE reminds readers that the concerns identified in the report emerged over a long period of time and addressing them will also take time.

3. Historic and Projected O&M and Capital Overview

To assist with developing a comparison of the cost estimates in the previous section, the following provides a summary overview of NWE's (including the former Montana Power Company (MPC)) electric and natural gas utilities operations and maintenance expenses and capital levels since 1999:

a. Electric Distribution and Transmission O&M Expense

The following information shows the Electric Distribution and Transmission actual expense levels since 1995, through the 2004 plan, as compared with the dollars currently in NWE's T&D rates (based on the 1999 test period filing).

The actual expense levels are based on the annual PSC Schedule 10 filings by FERC account.

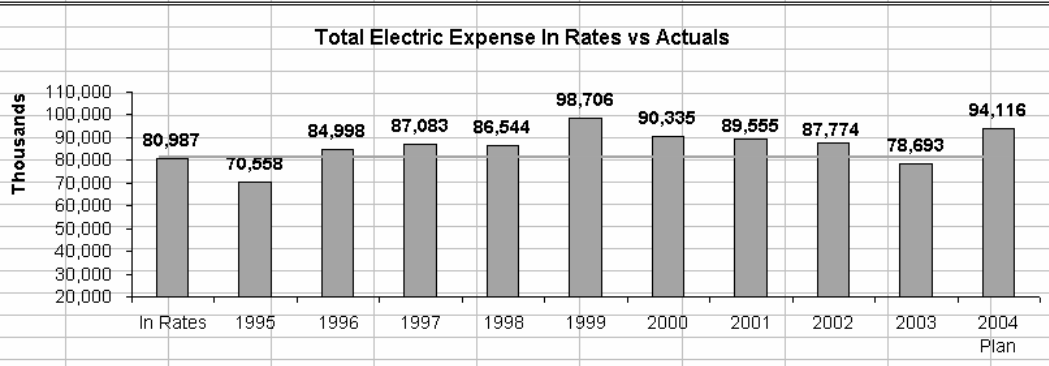
What's in Rates vs Current Spends - ELECTRIC Transmission and Distribution Expense
Rates established based on 1999 Test-Year and Normalizations

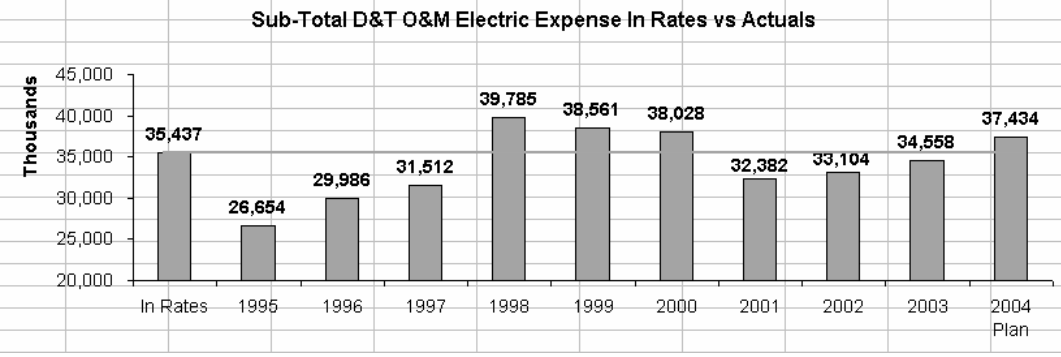
Electric Dollars

	In Rates	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 Plan
Transmission Op	8,684,093	4,827,954	5,973,858	6,537,471	11,313,712	10,544,122	9,017,343	5,605,638	10,599,187	9,182,877	8,604,178
Transmission Maint	3,681,990	2,719,088	3,562,781	3,615,121	3,817,093	3,922,086	5,876,423	4,712,376	3,726,737	3,650,257	4,538,874
Distribution Op	11,662,931	9,986,699	10,793,145	11,333,810	12,623,420	12,332,747	13,002,146	12,647,078	11,559,815	14,420,236	15,513,176
Distribution Maint	11,407,862	9,120,598	9,656,406	10,025,968	12,030,476	11,762,389	10,131,992	9,416,838	7,218,244	7,304,685	8,778,148
Subtotal D&T O&M	***35,436,876***	***26,654,339***	***29,986,190***	***31,512,370***	***39,784,701***	***38,561,344***	***38,027,903***	***32,381,929***	***33,103,982***	***34,558,055***	***37,434,376***
Customer Exp	10,893,537	11,218,111	11,314,965	11,675,254	11,347,878	13,161,880	9,940,576	10,776,082	10,669,820	11,206,094	11,318,589
Op A&G	34,656,238	32,685,586	43,696,870	43,895,319	35,411,454	46,982,722	42,366,486	46,397,043	44,000,594	32,928,649	45,363,522
Total Expense	**80,986,651**	**70,558,036**	**84,998,025**	**87,082,943**	**86,544,033**	**98,705,946**	**90,334,965**	**89,555,053**	**87,774,397**	**78,692,798**	**94,116,487**

Percent Change

	In Rates	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 Plan
Transmission Op		-44.4%	-31.2%	-24.7%	30.3%	21.4%	3.8%	-35.4%	22.1%	5.7%	-0.9%
Transmission Maint		-26.2%	-3.2%	-1.8%	3.7%	6.5%	59.6%	28.0%	1.2%	-0.9%	23.3%
Distribution Op		-14.4%	-7.5%	-2.8%	8.2%	5.7%	11.5%	8.4%	-0.9%	23.6%	33.0%
Distribution Maint		-20.0%	-15.4%	-12.1%	5.5%	3.1%	-11.2%	-17.5%	-36.7%	-36.0%	-23.1%
Subtotal D&T O&M		***-24.8%***	***-15.4%***	***-11.1%***	***12.3%***	***8.8%***	***7.3%***	***-8.6%***	***-6.6%***	***-2.5%***	***5.6%***
Customer Exp		3.0%	3.9%	7.2%	4.2%	20.8%	-8.7%	-1.1%	-2.1%	2.9%	3.9%
Op A&G		-5.7%	26.1%	26.7%	2.2%	35.6%	22.2%	33.9%	27.0%	-5.0%	30.9%
Total Expense	-	**-12.9%**	**5.0%**	**7.5%**	**6.9%**	**21.9%**	**11.5%**	**10.6%**	**8.4%**	**-2.8%**	**16.2%**





b. Gas Distribution, Transmission, and Storage O&M and A&G Expense

The following illustrates the Gas Distribution, Transmission, and Storage actual expenses since 1995, through the 2004 plan, as compared with the dollars currently in rates based on the 1999 test period and filing. Again, the actual expenses are based on the annual PSC Schedule 27 filings by FERC account. A subtotal is included for analysis of the operating and maintenance expenses since 1995, compared to rates.

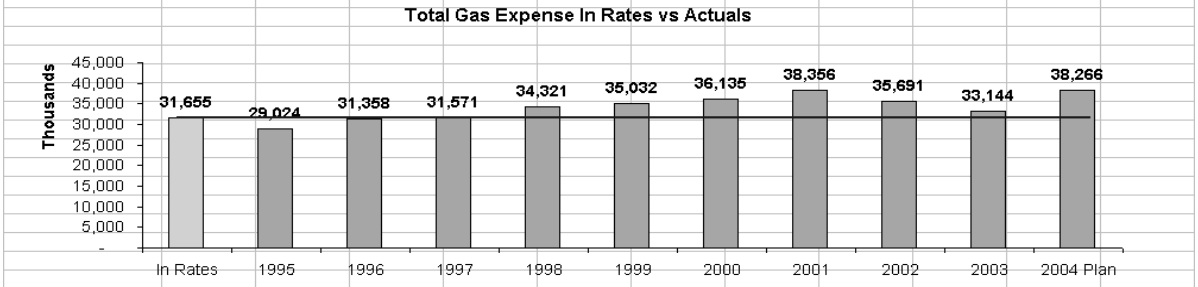
What's in Rates vs Current Spends - GAS
Rates established based on 1999 Test-Year and Normalizations

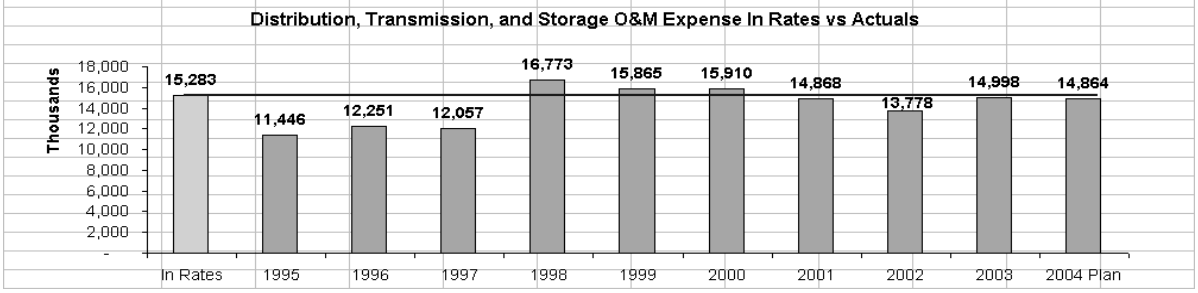
Gas Dollars

	In Rates	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 Plan
Trans & Store Op	4,282,729	2,479,915	2,721,818	2,462,681	4,354,471	4,418,531	5,900,871	5,447,188	5,391,289	5,759,489	4,979,233
Trans & Store Maint	2,694,357	1,596,407	1,983,119	1,987,189	2,885,714	2,727,215	2,097,849	1,854,781	1,804,998	1,662,387	1,973,779
Distribution Op	6,724,766	5,475,378	5,826,292	5,991,011	7,341,082	6,988,787	5,928,394	5,848,647	5,214,340	6,378,890	7,318,792
Distribution Maint	1,581,075	1,894,708	1,720,250	1,616,084	2,192,209	1,730,377	1,983,221	1,717,532	1,367,402	1,196,970	591,890
Subtotal O&M	***15,282,927***	***11,446,408***	***12,251,479***	***12,056,966***	***16,773,476***	***15,864,909***	***15,910,335***	***14,868,148***	***13,778,029***	***14,997,736***	***14,863,695***
Customer Exp	5,046,349	4,085,489	3,803,980	5,245,166	5,127,710	5,129,962	4,765,654	5,668,270	4,468,046	4,648,471	4,668,880
Op A&G	11,326,108	13,492,236	15,302,084	14,268,767	12,419,631	14,036,830	15,459,204	17,819,747	17,444,460	13,497,946	18,733,072
Total Expense	**31,655,384**	**29,024,133**	**31,357,543**	**31,570,899**	**34,320,818**	**35,031,701**	**36,135,194**	**38,356,165**	**35,690,535**	**33,144,153**	**38,265,647**

Percent Increase

	In Rates	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 Plan
Transmission Op		-42.1%	-36.4%	-42.5%	1.7%	3.2%	37.8%	27.2%	25.9%	34.5%	16.3%
Transmission Maint		-40.7%	-26.4%	-26.2%	7.1%	1.2%	-22.1%	-31.2%	-33.0%	-38.3%	-26.7%
Distribution Op		-18.6%	-13.4%	-10.9%	9.2%	3.9%	-11.8%	-13.0%	-22.5%	-5.1%	8.8%
Distribution Maint		19.8%	8.8%	2.2%	38.7%	9.4%	25.4%	8.6%	-13.5%	-24.3%	-62.6%
Subtotal O&M		-25.1%	-19.8%	-21.1%	9.8%	3.8%	4.1%	-2.7%	-9.8%	-1.9%	-2.7%
Customer Exp		-19.0%	-24.6%	3.9%	1.6%	1.7%	-5.6%	12.3%	-11.5%	-7.9%	-7.5%
Op A&G		19.1%	35.1%	26.0%	9.7%	23.9%	36.5%	57.3%	54.0%	19.2%	65.4%
Total Expense	-	**-8.3%**	**-0.9%**	**-0.3%**	**8.4%**	**10.7%**	**14.2%**	**21.2%**	**12.7%**	**4.7%**	**20.9%**





c. Distribution and Transmission Capital Costs

Capital expenditures have approximated depreciation expense. The following information, based on annual project system reporting, indicates the historical and forecasted level of capital expenditures:

Montana Capital Expenditures
1997-2003 Actuals and 2004 Plan

	ACTUALS							2004 Plan
	1997	1998	1999	2000	2001	2002	2003	2004
Electric								
Transmission	18,843,121	12,010,238	10,741,793	Note:	10,272,908	9,311,192	8,821,164	13,186,470
Distribution	30,909,996	30,712,844	27,593,167		24,931,651	23,378,928	25,903,003	26,265,002
				Mid year conversion to enterprise SAP system - project data incomplete				
Gas								
Transmission	4,136,767	5,562,272	5,727,454		8,171,446	3,452,881	3,551,115	6,531,592
Distribution	9,131,084	8,312,036	7,527,385		4,992,464	3,532,729	5,229,254	4,909,885
Utility Communications	609,203	1,756,547	1,214,696		718,965	868,387	489,464	564,330
Common	6,355,906	4,838,323	984,480		4,745,775	4,801,757	1,079,316	4,965,990
Total D&T	**69,986,077**	**63,192,260**	**53,788,975**		**53,833,209**	**45,345,874**	**45,073,316**	**56,423,269**
Growth Breakout - New Connects, Lighting, Meters, Transformers								
Electric Distribution	19,731,636	17,197,257	14,642,417		11,294,659	10,564,293	12,986,757	10,225,956
Gas Distribution	7,359,872	5,672,900	5,334,373		2,465,017	2,113,801	2,695,854	2,243,219
System Integrity	**42,894,569**	**40,322,103**	**33,812,185**	-	**40,073,533**	**32,667,780**	**29,390,705**	**43,954,094**

4. Conclusion

As we look to the future and the challenges that face the Company we need to find ways to utilize new techniques, practices and technologies. With this theme in mind, part of our challenge will be thinking "outside of the box" to address these recommendations. For example, a question we might ask ourselves is: "Are there better economic alternatives to simply replacing underground facilities to achieve a higher level of reliability, like alternative feeds to the areas in question?"

NorthWestern will complete its Operational Action Plan by the end of the year. This plan will include further analysis of the costs associated with each of the recommendations. At that time, we would anticipate beginning a discussion with the Commission and Consumer Counsel about how to incorporate these items into other upcoming activities such as those outlined in our stipulated agreement with the MPSC.

5. Recommendation Response Summary

NWE OPERATIONS AUDIT

Date: 8/25/04

NWE No.	Liberty No.	Category	Response (Accept/Modify/Study)	Annual Cost Incremental to 2004	Reliability Impact**	Schedule (days)***	Assigned to: (Owner)	Capital or Expense
1	**R-II-1 Page 8**	**Analysis of Interruption Frequency**	Study	<$500K	Intermediate	180-360	McKee	Expense
2	**R-II-2 Page 19**	**Equipment Failure/Outages**	Accept	$500K-$1M	Intermediate	360+	Widhalm	Capital
3	**R-II-3 Page 19**	**Transmission Tree Trimming**	Modify	$500K-$1M	Low	360+	Widhalm	Expense
4	**R-II-4 Page 19**	**Relay Maintenance**	Accept	<$500K	Low	<90	Luther	Expense
5D	**R-II-5 Page 20**	**Substation Maintenance**	Study	TBD	Intermediate	180-360	McKee	Expense
5T	**R-II-5 Page 20**	**Substation Maintenance**	Accept	<$500K	Low	180-360	Widhalm	Expense
6	**R-II-6 Page 20**	**Transmission Pole Maintenance**	Accept	>$1M	Intermediate	360+	Widhalm	Capital
7	**R-II-7 Page 20**	**Inspection Program Compliance**	Accept	$500K-$1M	Low	360+	Widhalm	Expense
8	**R-II-8 Page 25**	**Distribution System Planning**	Accept/Modify	<$500K	Low	360+	McKee	Expense
9	**R-II-9 Page 30 & 31**	**Cable Failures**	Modify	>$1M	Low	180-360	Carmody/McKee	Capital
10	**R-II-10 Page 31**	**Animals**	Modify	$500K-$1M	Low	180-360	McKee	Capital
11	**R-II-11 Page 31**	**Distribution Tree Trimming**	Modify	$500K-$1M	High	180-360	McKee	Expense
12	**R-II-12 Page 31 & 32**	**Distribution Pole Maintenance**	Modify	>$1M	Intermediate	360+	McKee	Capital
13	**R-II-13 Page 32**	**Compliance to Inspection Schedules**	Study	TBD	Intermediate	180-360	McKee/Lehner	Capital
14	**R-III-1 Page 37**	**Transmission / Distribution Interface**	Accept	Minimal	NA	<90	McKee/Wateman	Expense
15	**R-III-2 Page 41**	**Integrity Management Program**	Accept/Modify	$500K-$1M	NA	<90	Waterman	Capital
16D	**R-III-3 Page 41**	**Third Party Damages**	Accept	Minimal	NA	<90	Carmody/Waterman	Expense
17D	**R-III-4 Page 44**	**Farm Taps**	Modify	Minimal	NA	180-360	McKee	Expense
18	**R-III-5 Page 54**	**Leak Survey Records**	Accept	<$500K	NA	90-180	Carmody/Krusemark	Expense
19	**R-III-6 Page 54**	**Weather monitoring**	Accept/Study	Minimal	NA	90-180	Johnston/Vivian	Expense
20	**R-V-1 Page 76**	**Financial Forecast**	Study	TBD	Intermediate	360+	McKee/Widhalm	Expense
21D	**R-V-2 Page 77**	**Staffing Evaluation**	Accept		N/A	<90	Pohl	Expense
21T	**R-V-2 Page 77**	**Staffing Evaluation**	Accept		N/A	90-180	Gates	Expense

6. Individual Recommendation Responses

TABLE OF CONTENTS

1D Recommendation No. - II-1 - Analysis of Interruption Frequency

Liberty's Recommendation

Because of the recent increasing trends in interruption frequency and outage counts NWE–M should –

- Study the cause factors and perform an analysis of the measures.
- Pay particular attention to interruptions caused by equipment failures. Then specify the corrective actions it plans to take to improve performance.
- Monitor closely the interruption duration indices to determine whether they too are on the rise

NWE General Response:						**Owner:**	**McKee**
Accept:		**Modify:**		**Further Study:**	**X**		

Over the past five years NorthWestern Energy has made significant advances in monitoring system reliability. Interruption data has been recorded using more consistent and standardized methods. Interruptions have been categorized as overhead or underground with over twenty cause groups identified including equipment failures, wind, lightning, trees, animals and snow/ice. Interruption levels include transmission, distribution and service levels. Outage locations can be identified to the division, subdivision or feeder level. Trends are identified with respect to cause, source and overall indices contribution. Forecasts of future reliability are projected using historical data analysis. System equipment failures are captured for several equipment types, including conductor, poles, insulators, connectors, disconnects, transformers and arrestors. Outage frequency, duration, and customers affected are recorded and monitored. NorthWestern Energy recognizes improvements can be made to current reliability reporting. The outage tracking system should provide the ability to omit major events and momentary outages from indices calculations per industry standards. This would provide a better understanding of the primary day-to-day interruption causes.

Action Plan:

A newly implemented Distribution Operations structure includes a Distribution System Maintenance and Planning function. This new group will be responsible for monitoring and consistent analysis of system reliability. System Planning and Maintenance will coordinate with Engineering to identify areas of concern and proactively mitigate impacts to system reliability. In addition to interruption cause and source, interruption frequency, step duration and the number of customers affected will be analyzed to determine the best course of action to be taken. System and Maintenance Planning will further facilitate Engineering by monitoring the performance of implemented mitigation practices to determine cost vs. benefit ratios and help identify best company practices. Eventually costs can be predetermined to meet or exceed present system target indices. Reliability reporting will provide the ability to omit major events per IEEE 1366-2003 2.5 Beta methodology "Major Event Day." Momentary outages will be omitted per IEEE 3.15 definition.

Cost*:	**TBD**		**Minimal**		**<$500K**	**X**	**$500K-$1M**		**>$1M**	

*Annual cost incremental to 2004

Reliability:	**Low**		**Intermediate**	**X**	**Significant**	

Schedule (days):	**<90**		**90 – 180**		**180-360**	**X**	**360+**	

2T Recommendation No. - II-2 - Equipment-Failure Outages

Liberty's Recommendation:

NWE–M should –

Fully fund its inspection, integrity, and maintenance programs and determine what "catch-up" work it should perform because of non-adherence in the past.

Considering the age of NWE–M's equipment, Liberty recommends full program compliance

NWE General Response:						**Owner:**	**Widhalm**
Accept:	**X**	**Modify:**		**Further Study:**			
A new transmission maintenance plan was recently written and was found by Liberty during the audit to be consistent with good utility practice. NWE does agree with Liberty's recommendation to implement the new Transmission maintenance plan.							

Action Plan:
The new Transmission maintenance plan is geared more toward proactive maintenance, which ultimately should result in less reactive maintenance and hence improved transmission reliability. An evaluation of funding levels necessary to implement this new maintenance plan will be completed and included in the budget planning cycle for 2005 and beyond. It will also be necessary to evaluate current staffing support in the Transmission area and determine appropriate resources to fully implement the plan.

Cost*:	**TBD**		**Minimal**		**<$500K**		**$500K-$1M**	**X**	**>$1M**		
*Annual cost incremental to 2004											

Reliability:	**Low**		**Intermediate**	**X**	**Significant**		

Schedule (days):	**<90**		**90 – 180**		**180-360**	**X**	**360+**		

3T Recommendation No. - II-3 - Transmission Tree Trimming

Liberty's Recommendation:

NWE-M should –

Put its transmission lines on a time-based tree trimming cycle, based on tree types, terrain, and voltage, supplemented by an annual inspection program to identify hot spots. The appropriate tree-trimming cycle would depend largely on specific tree growth rates in Montana

NWE General Response:						**Owner:**	**Widhalm**
Accept:		**Modify:**	**X**	**Further Study:**			
NWE's most recent vegetation plan was reviewed by Liberty and was found to be consistent with good utility practice. In general NWE agrees with full implementation and compliance with the vegetation management plan, however, because of anticipated NERC recommendations, it may be necessary to review the current plan. Proper tree trimming cycles for various tree types and geographic areas vary across the service territory. It requires significant planning and analysis efforts to determine the correct cycle for the area. For example, in some areas of the service territory, a 20-year cycle is appropriate; yet in other geographic areas, only a four-year cycle is appropriate. Two large limiting factors that affect transmission reliability are danger trees outside of the right-of-way and landowner/easement limitations. Current trends in the industry are to adopt a national vegetation management standard by NERC. NWE is required to adhere to the NERC standard of vegetation management.							
Action Plan:							
NWE will develop a plan for full implementation of the vegetation management plan and follow closely the adoption of the NERC vegetation standard. NWE will increase funding for the existing vegetation management for the next 2 years to allow for 'catch-up' and evaluate funding levels for 2007 and beyond.							

Cost*:	**TBD**		**Minimal**		**<$500K**		**$500K-$1M**	**X**	**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**	**X**	**Intermediate**		**Significant**	

Schedule (days):	**<90**		**90 – 180**	**X**	**180-360**		**360+**	

4T Recommendation No. - II-4 - Relay Maintenance

Liberty's Recommendation:
NWE-M should –
Bring its relay maintenance work current and re-evaluate the need to complete the previously scheduled relay upgrade work.

NWE General Response:					**Owner:**	**Luther**
Accept:	**X**	**Modify:**		**Further Study:**		

The Liberty Audit found that NWE has a good relay maintenance program; however, it has not fully complied with the program. Liberty also found that 12 percent of the sustained transmission outages were attributable to system protection problems. Not all of the outages were due to a lack of maintenance. Even so, scheduled relay maintenance will have fallen behind by approximately one-man year by the end of 2004. The Liberty Audit also suggested that a distribution relay maintenance program similar to the transmission relay maintenance program be implemented.

Sufficient expense dollars have been budgeted to perform relay maintenance on the transmission system and a portion of the distribution system. Additional funding may be required to perform maintenance on the remainder of the distribution system and bring relay maintenance work current.

Action Plan:

An evaluation of funding requirements to fully implement transmission and distribution relay maintenance will be completed. These funding requirements will be part of the budget planning process for 2005 and 2006 to bring relay maintenance work current. A recently hired relay engineer will be responsible for overseeing the relay maintenance program as part of his duties. A detailed inventory of transmission and distribution relays has recently been completed and will be utilzed as the basis for a relay maintenance database. New software will be purchased to track relay maintenance and store relay settings. These efforts will also allow NWE to comply with WECC/NERC compliance requirements for relay maintenance.

Previously scheduled relay upgrade work will be re-evaluated as part of the capital budget prioritization process.

Cost*:	**TBD**		**Minimal**	**X**	**<$500K**		**$500K-$1M**		**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**	**X**	**Intermediate**		**Significant**	

Schedule (days):	**<90**	**X**	**90 – 180**		**180-360**		**360+**	

5D Recommendation No. - II-5 - Substation Maintenance

Liberty's Recommendation:

NWE-M should –

Develop formalized substation equipment maintenance and testing programs that include the work NWE will perform and work schedules based on system priorities, such as equipment voltage and where the equipment is on the system.

NWE General Response:						**Owner:**	**McKee**
Accept:		**Modify:**		**Further Study:**	**X**		

Basic monthly substation inspections for both transmission and distribution substations are performed routinely by division substation foremen looking for obvious problems or signs of trouble in a "walk through" inspection. Meters are read at this time, as well as breaker counts, regulator operations, etc. Minor problems found may be corrected immediately or scheduled for later depending on circumstances and resources required. Infrared inspections for hot spots weed control, and oil sampling/Dissolved Gas Analysis (DGA) testing, and other more detailed inspections are done on an annual basis as the time and availability of local substation foremen and contractors permit. Other maintenance work is done as required based on observations in the sub, equipment counts, or other activity. NorthWestern has recently developed a substation equipment database which inventories all major equipment and their attributes in each of our substations, as well as the location of spare equipment, completed inspections, etc. Standard input screens and forms are available for each location.

Action Plan:

A newly implemented Distribution Operations structure has created a Distribution System and Maintenance Planning function. This new group will review internal and external substation maintenance and testing programs to develop a new program that incorporates DGA, infrared testing, power factor testing, breaker maintenance, and substation reporting consistent with Reliability Centered Maintenance practices or a similar system performance process. Also under development is an enhanced methodology to prioritize work based on customer reliability/company risk analysis. These programs will be defined within NWE's Electric O&M Guidelines. Several substation personnel shortages are being addressed.

Better utilization of personnel and expertise among divisions will also be reviewed along with our supervisory/internet systems and new technology to analyze and report developing problems. It is also intended to develop a program to assess the economics/risk reduction of replacing older equipment.

Cost*:	**TBD**	**X**	**Minimal**		**<$500K**		**$500K-$1M**		**>$1M**	

*Annual cost incremental to 2004

Reliability:	**Low**		**Intermediate**	**X**	**Significant**	

Schedule (days):	**<90**		**90 – 180**		**180-360**	**X**	**360+**	

5T Recommendation No. - II-5 - Substation Maintenance

Liberty's Recommendation:

NWE-M should –

Develop formalized substation equipment maintenance and testing programs that include the work it will perform and work schedules based on system priorities, such as equipment voltage and where the equipment is on the system.

NWE General Response:						**Owner:**	**Widhalm**
Accept:	**X**	**Modify:**		**Further Study:**			

A new transmission substation maintenance plan was recently written and was found by Liberty during the audit to be consistent with good utility practice. NWE agrees with Liberty's recommendation to implement this new maintenance plan. NWE is presently addressing the substation engineering recommendation and additional planning efforts are necessary to fully implement the substation maintenance plan.

Basic monthly substation inspections for both transmission and distribution substations are performed routinely by division substation foremen looking for obvious problems or signs of trouble in a "walk through" inspection. Meters are read at this time, as well as breaker counts, regulator operations, etc. Minor problems found may be corrected immediately, or scheduled for later depending on circumstances and resources required. Infrared inspections for hot spots, weed control, and oil screening/Dissolved Gas Analysis (DGA) testing, and other detailed inspections are done on an annual basis as the time and availability of local substation foremen and contractors permit. Other maintenance work is done as required based on observations in the sub, equipment counts, or other activity. NorthWestern has recently developed a substation equipment database which inventories all major equipment and their attributes in each of our substations, as well as the location of spare equipment, completed inspections, etc. Standard input screens and forms are available for each location.

Action Plan:

NWE will develop procedures to fully implement and comply with the substation maintenance plan. Also under development is an enhanced methodology to prioritize work based on customer reliability/company risk analysis. These programs will be defined within NWE's Electric O&M Guidelines. Several substation personnel shortages are being addressed.

Better utilization of personnel and expertise among divisions will also be reviewed along with our supervisory/internet systems and new technology to analyze and report developing problems. It is also intended to develop a program to assess the economics/risk reduction of replacing older equipment.

Cost*:	**TBD**		**Minimal**		**<$500K**	**X**	**$500K-$1M**		**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**	**X**	**Intermediate**		**Significant**	

Schedule (days):	**<90**		**90 – 180**		**180-360**	**X**	**360+**	

6T Recommendation No. - II-6 - Transmission Pole Maintenance

Liberty's Recommendation:

NWE-M should –

1) Develop methods for identifying schedules for replacing these poles based on safety concerns as well as criticality, and to replace bad poles based on these determinations even when they are not included in system integrity projects.
2) Align the transmission pole rating system to be common with the distribution system, which has 5 rating levels.

NWE General Response:						**Owner:**	**Widhalm**
Accept:	**X**	**Modify:**		**Further Study:**			

A new transmission maintenance plan was recently written and was found by Liberty during the audit to be consistent with good utility practice. NWE agrees with Liberty's recommendation to implement the new transmission maintenance plan that provides the guidance and direction for transmission pole maintenance. As part of this transmission maintenance plan, NWE is currently developing a system-wide System Integrity database that address pole inventories, inspection and maintenance records, and records completed corrective action work such as pole replacement, or stubbing. This database will allow for statistical analysis of all NWE's transmission circuits with the goal of allowing links between reliability data and circuit conditions.

Further study of the system needs is required to address pole maintenance. Significant funding is necessary to address system integrity needs going forward as well as catch up work to address current 4-rated poles.

Action Plan:

Continue studying and developing a plan to fully understand the funding impacts of this recommendation.

NWE will investigate aligning the separate Transmission and Distribution pole rating systems into one common system.

Cost*:	**TBD**		**Minimal**		**<$500K**		**$500K-$1M**		**>$1M**	**X**
*Annual cost incremental to 2004										

Reliability:	**Low**		**Intermediate**	**X**	**Significant**	

Schedule (days):	**<90**		**90 – 180**		**180-360**		**360+**	**X**

7T Recommendation No. - II-7 - Inspection Program Compliance

Liberty's Recommendation:

NWE-M should –

Give its electric transmission inspection programs the same funding priority as it does its critical system integrity programs.

NWE General Response:						Owner:	Widhalm
Accept:	X	Modify:		Further Study:			

A new Transmission Maintenance Plan was recently written and was found by Liberty during the audit to be consistent with good utility practice. NWE agrees with Liberty's recommendation to implement the new transmission maintenance plan. This plan includes system inspection.

The plan states NWE will inspect 10% of the system per year. There is a need to increase funding from the current 7.5% allowance per year.

Action Plan:

Initiate full implementation and compliance with the inspection and maintenance plan. Increase funding for 20% of the system inspections per year for 2005 and 2006 to catch up on past inspections and evaluate funding for 10% of the system inspections per year in 2007 & beyond.

Cost*:	TBD		Minimal		<$500K		$500K-$1M	X	>$1M	

*Annual cost incremental to 2004

Reliability:	Low	X	Intermediate		Significant	

Schedule (days):	<90		90 – 180		180-360	X	360+	

8D Recommendation No. - II-8 - Distribution System Planning

Liberty's Recommendation:

NWE-M should –

(1) formalize the processes of forecasting distribution load growth up to 5 years or more (the process should identify growth projects and be tied in with transmission system planning);
(2) use programmable relays to monitor feeder loads on a real-time basis (this would also improve distribution feeder relay reliability); and assure that all distribution forecast and planning methods and engineering work are the same company-wide by putting into place tentative plans to standardize division organizations where the division planning engineers will be under a centralized distribution planning manager, and the division distribution design engineers will be under a centralize engineering manager.

NWE General Response:				**Owner:**	**McKee**
Accept:	**X**	**Modify:**	**X**	**Further Study:**	

NWE analyzed the benefits associated with a centralized distribution planning group to consistently monitor, forecast, evaluate and plan for system growth. The audit and the Liberty recommendations, reaffirmed NWE's plan to reorganize human assets within the distribution operations group, centralizing the planning function.

Also: Reference Recommendation 21D.

Action Plan:

NWE has recently announced an internal organizational change, realigning a group of engineering resources to focus on distribution planning (Distribution System & Maintenance Planning) with a separate group focusing on design work (Distribution Engineering). The "System Planning" team will be responsible for managing NWE's gas and electric distribution assets by defining consistent system maintenance practices and conducting growth planning studies, identifying existing system deficiencies and forecasting system deficiencies as growth occurs on the system in the future. It is intended that the T&D planning groups will meet periodically throughout the year. The NWE Distribution Planning group will continually evaluate tools, equipment and software to monitor feeder loads on a real-time basis.

NWE agrees with Liberty's recommendation (1); but in (2) there may be other technology and methods available to improve reliability.

Cost*:	**TBD**		**Minimal**		**<$500K**	**X**	**$500K-$1M**		**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**	**X**	**Intermediate**		**Significant**	

Schedule (days):	**<90**		**90 – 180**		**180-360**		**360+**	**X**

9D Recommendation No. – II-9 - Cable Failures

Liberty's Recommendation:

NWE-M should –
Evaluate reliability improvements that it could obtain from a better funded URD cable replacement program, and consider making it a primary critical system integrity program separate from the worst performing feeder program. This may have a greater immediate effect on overall reliability than does NWE–M's efforts with regard to the worst performing feeders.

NWE General Response:						**Owner:**	**Carmody**
Accept:		**Modify:**	**X**	**Further Study:**			
NorthWestern is aware of the potential impact that underground cable failures can have on system reliability metrics. NorthWestern has completed similar studies in regards to the potential impacts of the 1970s cable that is mentioned in Liberty's findings, and, while it agrees in theory that replacing all of this cable would reduce our system SAIDIs and CAIDIs, the financial impacts would be significant. Continuing to manage underground cable reliability will mean that the necessary funding and resources must be maintained to address the system requirements. Replacing additional sections of cable as mentioned in the study is a good approach and has been done by NorthWestern in the past.							
Action Plan:							
NWE will update its underground cable study that was completed several years ago and determine the investment required to replace all of the 1970s vintage cable suggested by Liberty. An evaluation will also be completed to determine if other alternatives make more sense from a reliability perspective, such as loop feeds or more automation. **NWE will include in its updated system integrity program a written procedure for replacing underground cable and establish policies for addressing additional segments of cable in multiple segments. In addition, NWE will centrally capture underground cable failures utilizing industry accepted technology and identify areas where multiple failures on different segments may be creating a cascading affect.** **NWE has created a Distribution Reliability Engineering position to monitor, analyze and report system reliability trends and identify areas of concern. Underground cable failure analysis is included in this position's job responsibility.**							

Cost*:	**TBD**		**Minimal**		**<$500K**		**$500K-$1M**		**>$1M**	**X**
*Annual cost incremental to 2004										

Reliability:	**Low**	**X**	**Intermediate**		**Significant**	

Schedule (days):	**<90**		**90 – 180**		**180-360**	**X**	**360+**	

10D Recommendation No. – II-10 - Animals

Liberty's Recommendation:

NWE-M should –

Have a more proactive animal protection program.

Evaluate reliability improvements that it could obtain from a better funded URD cable replacement program, and consider making it a primary critical system integrity program separate from the worst performing feeder program. This may have a greater immediate effect on overall reliability than does NWE–M's efforts with regard to the worst performing feeders.

NWE General Response:						**Owner:**	**McKee**
Accept:		**Modify:**	**X**	**Further Study:**			
NorthWestern Energy has been monitoring animal-related outages for a number of years and is aware that the trend is upward. While the frequency of this type of outages has increased, the overall impact to the Company's reliability is relatively less than some other outage types. NWE has allocated a portion of its resources to address this problem caused by raptors and squirrels. NWE has been choosing the worst performing feeders in this area and is correcting these circuits. The number of circuits affected each year by squirrels continues to increase as well. **NWE continues to work with the Fish, Wildlife and Parks Commission to mitigate affects to raptors and incorporates their recommendations when designing new lines. NWE has changed its construction standards to include protection for animals and raptors.** **NWE agrees that a more proactive approach can be taken on protecting circuits from squirrel-caused outages but tries to balance the resources allocated to this situation to the overall impact that this is having on other system reliability parameters.**							
Action Plan:							
NWE will complete a reliability analysis of the overall impact of animals on the system, the number of circuits and the necessary resources to mitigate animal-caused outages. **NWE will develop a written guideline addressing animal outages.** **NWE has created a new Distribution Reliability Engineering position to monitor, analyze and report system reliability trends and identify areas of concern. Animal-caused outage analysis is included in this position's job responsibility.**							

Cost*:	**TBD**		**Minimal**		**<$500K**		**$500K-$1M**	**X**	**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**	**X**	**Intermediate**		**Significant**	

Schedule (days):	**<90**		**90 – 180**		**180-360**	**X**	**360+**	

11D Recommendation No. – II-11 - Distribution Tree Trimming

Liberty's Recommendation:

NWE-M should –

Put extra funding to catch up on the trees that it missed when it reduced tree trimming.

Base its tree-trimming cycles on tree types, terrain, and voltage, and supplemented by an annual inspection program to identify hot spots. Although most utilities have 4- to 5-year tree-trimming cycles, the appropriate NWE–M tree-trimming cycle would depend largely on specific tree growth rates in Montana.

NWE General Response:						**Owner:**	**McKee**
Accept:		**Modify:**	**X**	**Further Study:**			
NWE generally agrees with Liberty's recommendation to adequately fund a tree trimming management program. It is recognized that tree trimming is an important part of the overall operations of a distribution system. Tree trimming is an ongoing operations expense. NWE has utilized hot spotting and proactive circuit clearance approaches. For a variety of reasons, including a more technical approach to prioritize circuits for tree trimming and financial constraints, tree trimming costs were reduced in recent years.							
Action Plan:							
NWE will complete an audit of its tree-trimming program and determine the necessary steps to return to a proactive approach (including analysis of tree types, growth rates, terrain and voltages) paralleling industry best practices. NWE will update its system integrity program with a written guideline outlining the tree trimming policy. **As part of the new Distribution Operations organization NWE has created a new Distribution Reliability Engineering position to monitor, analyze and report system reliability trends and identify areas of concern. Tree-related outage analysis is part of this position's job responsibility.**							

Cost*:	**TBD**		**Minimal**		**<$500K**		**$500K-$1M**	**X**	**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**		**Intermediate**		**Significant**	**X**

Schedule (days):	**<90**		**90 – 180**		**180-360**	**X**	**360+**	

12D Recommendation No. – II-12 - Distribution Pole Maintenance

Liberty's Recommendation:

NWE-M should –

1) Develop methods for identifying schedules for replacing bad poles based on safety concerns as well as criticality, and to replace bad poles based on these determinations even when they are not included in system integrity projects.
2) Align the distribution pole rating system to be common with the transmission system, which only has 4-rating levels.

NWE General Response:						**Owner:**	**McKee**
Accept:		**Modify:**	**X**	**Further Study:**			

Currently NorthWestern Energy's Distribution Pole Maintenance Program utilizes several sources to identify bad poles. Scheduled detailed inspections, test and treat inspections, drive by inspections and reports from field personnel are all used to identify problematic poles. Scheduled inspections employ trained personnel to rate poles based on the remaining life expectancy. Distribution poles are currently rated using a 1 thru 5 rating system. (1 Rating 90% - 100% life expectancy; 2 Rating 60% - 90% life expectancy; 3 Rating 20% - 60% life expectancy; 4 Rating 10% - 20% life expectancy; 5 Rating In need of immediate replacement)

A System Integrity database has been implemented to store pole inspections and record corrective action such as pole replacement, pole stubbing and c-trussing. SAP work order number, date of corrective action, work performed is also recorded. The work order number provides a link to SAP to derive cost at the feeder level. The division engineer can add Poles that have not been inspected but require corrective action to the database. Blanket funds are allocated to replace poles not identified by system integrity scheduled inspections. Presently, it is up to the discretion of the division engineer to prioritize the pole replacements.

Action Plan:

Evaluate poles currently rated as four or five from past system integrity inspections. Schedule pole replacements in accordance with work priority guidelines and available funding levels. Develop timeframe and allocate funding and resources for corrective action as required. Record corrective action taken or update existing data in the event corrective action had been previously completed but not documented.

Provide method to record poles in need of replacement that have not been identified by routine system integrity inspections. Determine pole replacement schedules based on safety concerns and criticality. Develop written procedures to record pole replacements or corrective actions such as stubbing or c-trussing in a standardized, centralized manner. NWE will investigate aligning the Transmission and Distribution pole rating systems into one common system.

Cost*:	**TBD**		**Minimal**		**<$500K**		**$500K-$1M**		**>$1M**	**X**

*Annual cost incremental to 2004

Reliability:	**Low**		**Intermediate**	**X**	**Significant**	

Schedule (days):	**<90**		**90 – 180**		**180-360**		**360+**	**X**

13D Recommendation No. – II-13 - Compliance to Inspection Schedules

Liberty's Recommendation:

NWE-M should –

Give its electric distribution inspection programs the same funding priority as it does its critical system integrity programs.

NWE General Response:						**Owner:**	**McKee**
Accept:		**Modify:**		**Further Study:**	**X**		
When NWE acquired the Montana Power distribution assets, it also acquired the inspection programs established a number of years before. Given access to additional information, technology and systems to track and evaluate asset condition, NWE intends to review and rewrite inspection programs, realigning them with current accepted utility practices.							
Action Plan:							
NWE's "Distribution System Planning & Maintenance" group will evaluate the current inspection and maintenance programs, reviewing and adopting good utility practices accepted in the industry. Changes to the inspection and maintenance programs will be implemented, as each guideline is reviewed/written. A recent Distribution Operations organizational change aligns a team of people responsible (Distribution Performance Management) to plan, schedule and ensure the work is completed according to its priority as outlined in the priority guidelines. System deficiencies identified during an inspection or maintenance task will be logged and prioritized for completion by the appropriate operating group or communicated to System Planning for further evaluation.							

Cost*:	**TBD**	**X**	**Minimal**		**<$500K**		**$500K-$1M**		**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**		**Intermediate**	**X**	**Significant**	

Schedule (days):	**<90**		**90 – 180**		**180-360**	**X**	**360+**	

14D&T Recommendation No. – III-1 - Transmission – Division Interface

Liberty's Recommendation:

NWE-M (GTS/Divisions) should –

1) Host a planning conference prior to the beginning of each heating season. Attendees from the divisions would be from the engineering staffs. The focus initially would be operational planning for the upcoming heating season.
2) Also establish periodic meetings on a regular basis, perhaps quarterly, to discuss issues of mutual interest. In addition to the annual planning issue, others include planning updates, farm taps, Lost-and-Unaccounted-for Gas, and standardization of reporting on third-party damages and leak surveys.

NWE General Response:						**Owner:**		**Waterman**	
Accept:	**X**	**Modify:**		**Further Study:**					
Prior to the recent reorganization of distribution operations, Division Services hosted a "Division Directors Meeting" at which GTS management discussed issues of mutual interest throughout the course of the year.									
Action Plan:									
Going forward, the Distribution Gas System Planning & Maintenance team and the Gas Transmission team will collaborate, on a peak day planning conference prior to the heating season, and will invite the appropriate personnel from distribution and transmission operations.									
Cost*:	**TBD**		**Minimal**	**X**	**<$500K**		**$500K-$1M**		**>$1M**
*Annual cost incremental to 2004									
Reliability:	**Low**		**Intermediate**			**Significant**			
Schedule (days):	**<90**	**X**	**90 – 180**		**180-360**		**360+**		

15T Recommendation No. – III-2 - Integrity Management Program

Liberty's Recommendation:

NWE-M should –

Include funding for the Integrity Management Program in its next budget cycle. To the extent that detailed estimates are not available (given that it is a multi-year program), the budget should include a placeholder level.

NWE General Response:						**Owner:**		**Waterman**	
Accept:	**X**	**Modify:**	**X**	**Further Study:**					

New pipeline safety rules commonly called Pipeline Integrity Management (PIM) have recently been mandated by law and will take effect December 17, 2004. The pipeline industry and NWE are preparing to comply with the new pipeline safety regulations.

The preliminary 2005 capital and expense budgets have included funding to comply with the new PIM program. It is anticipated that future annual costs will also be necessary to cover PIM compliance requirements.

Action Plan:

GTS will comply with all aspects of the new PIM rule, 49CFR192 Subpart O, as mandated by law. The current five-year capital plan includes funding for the program requirements.

As required by the new rules, GTS will have its PIM Program in effect by December 17, 2004. In addition to the plan, GTS will have begun assessments of transmission pipelines in high-density population areas. As required by the regulations, by 2007 GTS will have completed 50% of the baseline assessments for covered pipelines.

Cost*:	**TBD**		**Minimal**		**<$500K**		**$500K-$1M**	**X**	**>$1M**	

*Annual cost incremental to 2004

Reliability:	**Low**		**Intermediate**		**Significant**	

Schedule (days):	**<90**	**X**	**90 – 180**		**180-360**		**360+**	

16D&T Recommendation No. – III-3 - Third-Party Damages

Liberty's Recommendation:

NWE-M should –

1) Supplement the activities of One-Call and take a more active role in dissemination of information with respect to third-party damages to transmission lines.
2) Support the development of a system of citations and fines for third-party damages to underground facilities. They have proven to be an effective tool in reducing the number of third-party damages and are in effect in a number of states.

NWE General Response:				**Owner:**	**Waterman**
Accept:	**X**	**Modify:**		**Further Study:**	

NWE continues to address third-party damages through educational programs to our customers, contractors, lawmakers and other relevant stakeholders.

NWE accepts Liberty's recommendation in regards to establishing a system under which citations and fines could be levied in the case of third-party damages. The current One Call legislation does not allow for the creation of such a board that has the authority to impose fines on the contractors; therefore, legislation will need to be introduced in the upcoming legislative session. NWE has been working with Bud Criner, One Call State Manager, about adopting such legislation and creating a board capable of issuing citations.

NWE works with local developers, digging contractors, and homebuilders to remind them about the importance of digging safely around buried utilities.

The cost of compliance will be absorbed by our existing workforce and is expected to be minimal on an incremental basis.

Action Plan:

NWE addresses third-party damages through continued education to our customers, contractors, lawmakers and other relevant stakeholders. In addition, NWE will continue to assist Bud Criner in his efforts to amend the existing legislation.

Federal Pipeline Safety Regulation, 49CFR192, requires operators of gas pipelines to establish continuing education programs for customers, the public, government organizations and persons involved in excavation-related activities to recognize a pipeline emergency. In addition, new program guideline rules are being established in a recently proposed DOT rule making, 49CFR192 API RP1162. These new rules will strengthen safety requirements associated with third party damage. NWE intends to comply fully with all new regulations.

Cost*:	**TBD**		**Minimal**	**X**	**<$500K**		**$500K-$1M**		**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**		**Intermediate**		**Significant**	

Schedule (days):	**<90**	**X**	**90 – 180**		**180-360**		**360+**	

17D&T Recommendation No. – III-4 - Farm Taps

Liberty's Recommendation:

NWE-M should –

1) Clarify procedures and responsibilities for all aspects of installation and maintenance of farm taps. Since the farm tap information is used in the customer information system for load forecasting, emergency response, and perhaps other purposes, procedures and responsibility for the accuracy of that information must be crystal clear.
2) MUST (not should) know not only where the farm taps are and who is maintaining them, but whether they are creating potentially hazardous situations.
3) Convene a task force of GTS and division personnel to consider all aspects of farm tap installation and use, including at least the following:
   - Record-keeping for the farm taps already in existence
   - Whether and to what extent to equip current farm taps with flow measurement and SCADA equipment
   - Other equipment and use guidelines for existing farm taps, such as limits on load, and conditions for reducing their number
   - Policies for installation of future farm taps
   - Equipment standards for future farm taps
   - Whether NWE–M can make gate stations simpler and less expensive to discourage use of farm taps for non-farm customers.

NWE General Response:						**Owner:**	**McKee**
Accept:		**Modify:**	**X**	**Further Study:**			
NWE agrees that the policies and procedures need to be clarified as to who is responsible for the maintenance and operation of farm taps, especially the information that is contained in the customer information system. However, NWE does not agree that farm taps have "potentially significant safety issues and risks." It is from this position that Liberty's other recommendations are based. NWE's long experience with farm taps has not presented any more issues than those experienced in non-farm tap distribution systems. **It is anticipated that future capital costs will be incurred, including additional measurement and communication for existing farm tap customers. The expenditures are expected to be relatively low and absorbed within the regular maintenance capital budget.**							
Action Plan:							
GTS and Distribution personnel are forming a joint committee to address issues as they pertain to farm taps. The committee will write policies and procedures that clarify the responsibilities for each part of the operation and maintenance of farm taps with specific identification of the information in the customer information system which is important to forecasting and those lost and unaccounted for (LAUF) gas calculation. For many years the demarcation between the GTS and Distribution has been understood and has functioned well, but it will be clarified in policy. **With the creation of the Gas System Integrity Database, the equipment information and maintenance records are readily available to GTS and Distribution Operations. These records will be cross-referenced to the GIS system to ensure that all the farm taps are in the mapping system.** **NWE has been evaluating design changes to farm taps. We will finish this effort and publish new farm tap standards for construction and equipment.** **NWE will continue to evaluate gate station designs for simpler and less expensive configuration that could eliminate the use of farm taps.**							
Cost*:	**TBD**		**Minimal**	**X**	**<$500K**		**$500K-$1M**		**>$1M**	
*Annual cost incremental to 2004										
Reliability:	**Low**		**Intermediate**				**Significant**			
Schedule (days):	**<90**		**90 – 180**		**180-360**	**X**	**360+**			

18D Recommendation No. – III-5 - Leak Survey Records

Liberty's Recommendation:

NWE-M should –

1) Develop a standardized program and recordkeeping for documenting and responding to leak surveys.
2) The divisions may also need some clerical assistance to the Leak Technicians to standardize leak records management.
3) Develop a program to audit leak detection and repair records.

NWE General Response:						**Owner:**	**Carmody/Krusemark**
Accept:	**X**	**Modify:**		**Further Study:**			
NWE recognizes the importance of leak detection and recordkeeping on our gas distribution system. To address this task, NWE has a standardized set of guidelines, and operating procedures that cover this task in our Gas O&M Manual. The O&M manual provides guidelines for maintaining records in each operating area. Liberty found that each area maintains the records in a slightly different manner. NWE accepts this finding and will work to improve the process.							
Action Plan:							
NWE will provide additional training to each operating area on proper procedures; and will establish a process that will allow for central internal auditing of this process. **NWE has created a DOT coordinator position to monitor, analyze and report DOT compliance trends and identify areas of concern. The DOT coordinator is part of our new Performance Management Department, which is responsible to identify system maintenance trends and long-term planning. This group will work with Operations and Engineering to identify system requirements and make the necessary recommendations to the budget process.**							

Cost*:	**TBD**		**Minimal**		**<$500K**	**X**	**$500K-$1M**		**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**		**Intermediate**		**Significant**	

Schedule (days):	**<90**		**90 – 180**	**X**	**180-360**		**360+**	

19T Recommendation No. – III-6 - Weather Monitoring

NWE-M (Elec Operations & GTS) should –

Institute a program of basic weather monitoring and of communicating weather information between and among divisions.

Refer to the suggestion in the electric transmission section of this report regarding weather monitoring.

NWE General Response:						**Owner:**	**Johnston/Vivian**
Accept:	**X**	**Modify:**		**Further Study:**	**X**		

Most of the requirements of the Liberty Audit's recommendation for weather monitoring will be met by sending the weather forecast that is currently used by Gas Transmission and Storage (GTS) to division personnel. We also believe it is appropriate to "study" this issue by speaking directly with the division personnel to identify their needs in regard to weather monitoring. This will help us find out the "why" behind the Liberty recommendation – Is weather monitoring something done better by other utilities?

Along with the weather forecast via email, the gas SCADA system is available to at least one person in each division. The information is updated approximately every 15 minutes and has fairly accurate near real-time atmospheric temperature and wind speed for the "major" towns in Montana. Weather forecasts and weather alerts can be sent to individual cell phones as text messages for a minimal charge.

SOCC has a real-time lightning monitoring software program and PC that the System Operators use to determine if an interruption on the Electric Transmission System is lightning-caused. In our discussions with the divisions, we will ask whether they need a real-time lightning display and we will investigate a web-based version of the lightning program if the divisions are interested.

Action Plan:

Schedule a conference call with Bill Rhoads, Casey Johnston, Tom Vivian and the division managers to identify and discuss the needs of Division operating personnel. A budget and an action plan will then be developed to address the issues brought up during the conference call. The conference call will be scheduled for sometime in September 2004.

Cost*:	**TBD**		**Minimal**	**X**	**<$500K**		**$500K-$1M**		**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**		**Intermediate**		**Significant**	

Schedule (days):	**<90**		**90 – 180**	**X**	**180-360**		**360+**	

20D&T Recommendation No. – V-1 – Financial Forecast

Liberty's Recommendation:

NWE-M should –

1) Prepare bottom-up financial forecasts for 2005-2008 that include all projects that will be required to maintain system reliability, including all major upgrade and required special projects, and that include operating and maintenance expenses necessary to maintain reliability and operational goals.
2) Factor the levels of total capital and O&M expenditures from the revised forecast into its financial planning.

NWE General Response:						**Owner:**	**McKee/Widhalm**
Accept:		**Modify:**		**Further Study:**	**X**		
NWE has developed annual budgets over the past couple of years from input from the field. In the 2003 capital budget process Asset Management and Division Services requested and received capital approvals for 2003 and beyond in an effort to identify potential system problems, and reliability and growth issues. Although not all inclusive, this information proved helpful in developing a five-year look at upcoming projects facing the business in the future.							
Action Plan:							
Noted in "Liberty's Operations Audit," recommendation R-II-8, NWE previously lacked a centralized distribution planning group. Recently announced organizational structure changes within Distribution Operations, and assembled a group specifically dedicated to focus on system planning. Similar to the 2003 budget process, the newly-formed planning group assembled team of individuals, forming a budget committee responsible to review all field request for the 2005 budget year and those related to future system growth and reliability (2006 and beyond). This information will be used to refresh a bottom up look at capital requests anticipated for the next five years and beyond.							

Cost*:	**TBD**	**X**	**Minimal**		**<$500K**		**$500K-$1M**		**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**		**Intermediate**	**X**	**Significant**	

Schedule (days):	**<90**		**90 – 180**		**180-360**		**360+**	**X**

21D Recommendation No. – V-2 - Staffing Evaluation

Liberty's Recommendation:

NWE–M should –

Conduct an assessment of professional and technician staffing to determine the optimum manpower levels necessary to meet its T&D safety, reliability, and operational objectives.

NWE General Response:						**Owner:**		**Pohl**	
Accept:	**X**	**Modify:**		**Further Study:**					
In the fourth quarter, 2003, and first quarter 2004, Distribution Operations analyzed, recommended and implemented a plan to address field staffing under its 2004 Distribution Field Staffing Plan and Analysis. Under this plan, nineteen (19) craft positions were added to the craft areas. Areas of review included emergency response, reliability, work volume, overtime, and age demographics. From this information a gap analysis was performed to determine where there might be staffing shortages. A similar study and gap analysis was performed for the professional and technical positions using metrics relative to these job responsibilities. Areas identified for additional support were in planning, engineering, reliability, work scheduling, and new construction. From this, a new Distribution organization was developed to address the gaps. This study was underway when Liberty performed its audit and Liberty's review basically confirmed the process was on target. These positions should improve reliability, efficiency, and safety in the longer term.									
Action Plan:									
The assessment that was being performed at the time of Liberty's audit was completed, and an additional 12 positions within the engineering, estimator, and operations superintendent areas were identified. Job postings for most of these positions are nearly complete and work will continue to select qualified personnel to fill these positions. No costs have been specifically identified for this effort as operational efficiency, reliability, and safety improvements are expected to offset the cost of the additional personnel. Also, reliability is expected to improve with the additional personnel and the increased emphasis on planning, but this is difficult to quantify.									

Cost*:	**TBD**		**Minimal**		**<$500K**		**$500K-$1M**		**>$1M**	
*Annual cost incremental to 2004										

Reliability:	**Low**		**Intermediate**		**Significant**	

Schedule (days):	**<90**		**90 – 180**	**X**	**180-360**		**360+**	

21T Recommendation No. – V-2 - Staffing Evaluation

Liberty's Recommendation:

NWE–M should –

Conduct an assessment of professional and technician staffing to determine the optimum manpower levels necessary to meet its T&D safety, reliability, and operational objectives.

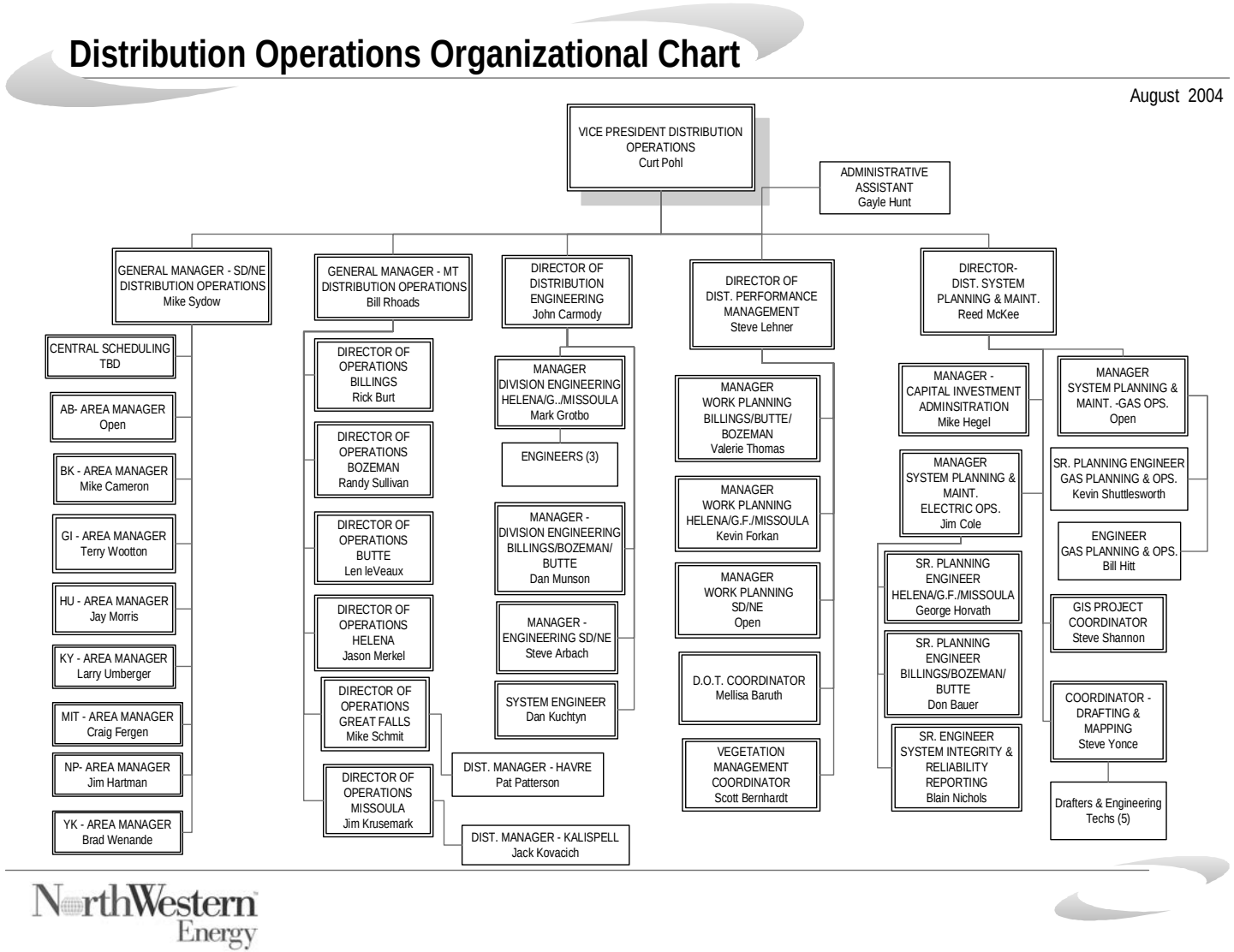
NWE General Response:						**Owner:**	**Widhalm**
Accept:	**X**	**Modify:**		**Further Study:**			
A study of field staffing in Gas Transmission was completed in 2004. Staffing recommendations from that study have been or are being implemented. The study recommended that 2 existing vacancies and 2 new positions be filled. Field staffing for Electric Transmission is made up of internal (Distribution) personnel as well as contract labor. Internal field resources for electric transmission were included in the Distribution staffing analysis.							
Action Plan:							
In addition to completing an unfinished recommendation from the Gas Transmission study, Electric Transmission is currently studying and evaluating the professional and administrative staff needs to determine resource requirements for current and Audit related work. This study will be completed by the end of 2004. The study will take into account resource requirements of implementation of the Liberty Operations Audit.							

Cost*:	**TBD**		**Minimal**		**<$500K**		**$500K-$1M**		**>$1M**		
*Annual cost incremental to 2004											

Reliability:	**Low**		**Intermediate**		**Significant**	

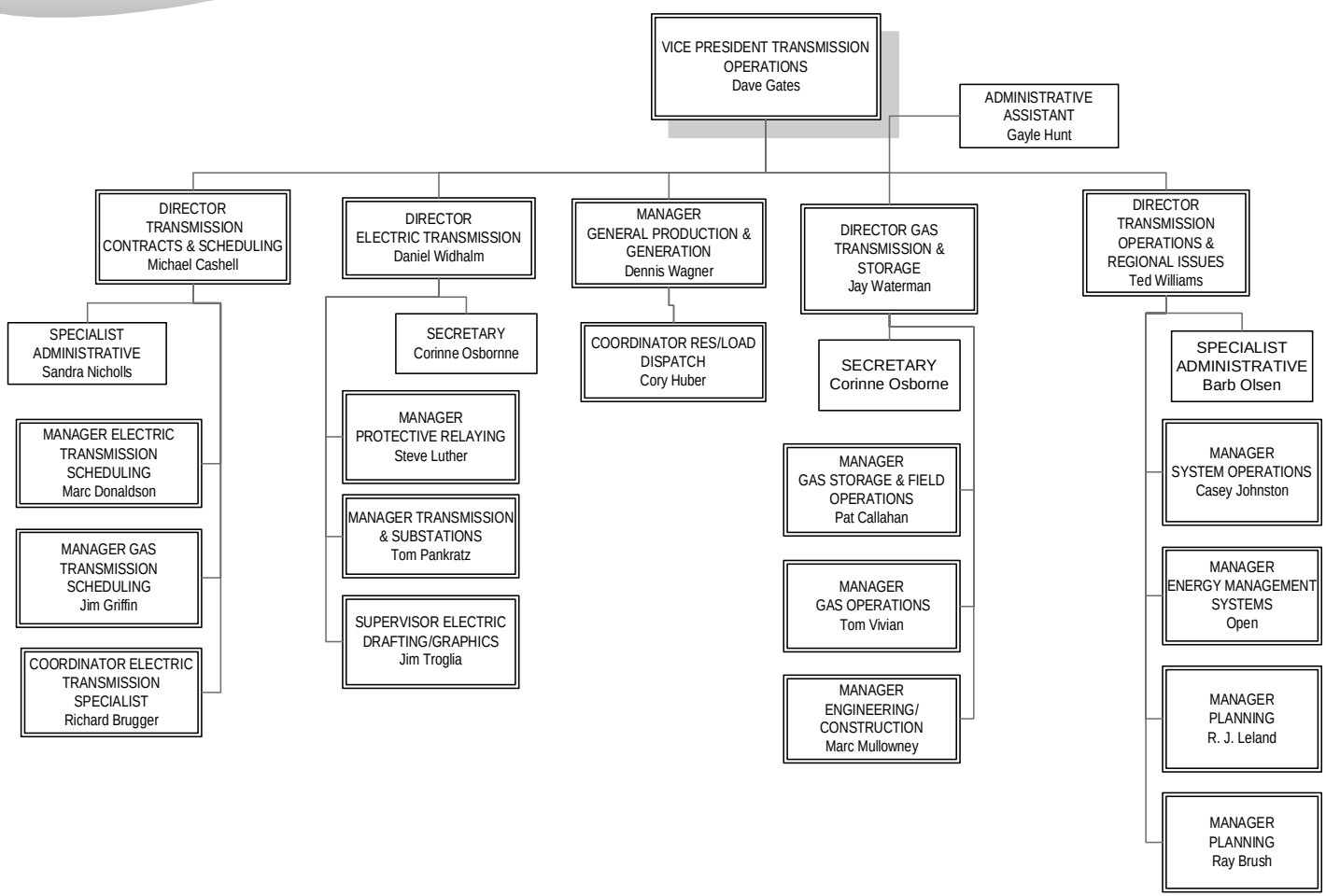
Schedule (days):	**<90**		**90 – 180**		**180-360**		**360+**		

7. New Organizational Charts



Transmission Operations Organizational Chart

August 2004



NorthWestern Energy

8. Owner's Job Titles

Dusty Rhoads **Distribution Operations** **General Manager**

Mr. Rhoads is the General Manager, Montana Distribution Operations. Mr. Rhoads has worked in leadership roles in departments related to thermal and hydro generation, electric transmission, and distribution, including the Director, Hydro Operations, and Director, Electric Transmission. He graduated from Montana State University with a bachelor's degree in Electrical Engineering and is a recent graduate with a master's degree in project engineering and management. He also served on active duty with the USAF as a staff meteorologist, and continued to serve in this capacity, as well as in positions in emergency management operational command and control in the USAF reserves. Mr. Rhoads is a licensed professional engineer in Montana, and is active in various local and state organizations including the Montana State Emergency Response Commission (SERC).

John Carmody **Distribution Engineering** **Director**

Mr. Carmody is currently the Director of Distribution Engineering. Mr. Carmody has 18 years of gas and electric distribution experience and has held various engineering, and management positions at Montana Power and NorthWestern Energy. Mr. Carmody has a Bachelor of Arts Degree in History and a Bachelor of Science Degree in Electrical Engineering from Montana State University, and Masters in Business Administration from the University of Montana. Mr. Carmody is a licensed Professional Engineer in the state of Montana.

Reed McKee **Distribution System Planning & Maint.** **Director**

Mr. McKee is presently the Director of Distribution System Planning and Maintenance. Before his recent appointment to the position, he served as NorthWestern's Director of Asset Management and Performance Management. He joined NorthWestern in 1994 as an engineer and has directed electric and natural gas construction and maintenance programs for the Company in South Dakota and Nebraska. Mr. McKee served in the United States Air Force and later graduated from South Dakota State University with a Bachelor of Science Degree in Mechanical Engineering with a minor in Mathematics. "Gas Utility Manager" named him 2000 Manager of the Year.

Dan Widhalm **Electric Transmission** **Director**

Mr. Widhalm started work with Montana Power Company in 1972. He has worked in several different areas of the company with most of the time spent in Power Operations and in the Gas Transmission areas. Mr. Widhalm became responsible for the Electric Transmission Department in May 2003. His current responsibilities include protective relaying, electric transmission line and substation construction and maintenance, and electric drafting.

Steve Lehner **Distribution Performance Management** **Director**

Mr. Lehner has extensive experience in utility field operations. His work experiences include: financial management and reporting, budgeting, staffing analysis, work planning and productivity, engineering, construction, union business, fleet, facilities, safety, marketing, software application projects, and field operations. Related areas of expertise are: Utility Field Operations Gas Design/Engineering; Support Services Asset Management; Work Planning and Productivity Construction. Mr. Lehner joined NorthWestern in 1992. He graduated from the South Dakota School of Mines and Technology with a Bachelor of Science in Mechanical Engineering.

Jay Waterman **Gas Transmission & Storage** **Director**

Mr. Waterman is the Director of Gas Transmission & Storage for NWE. He has worked for the Utility for the past 25 years. Prior to his current position, Mr. Waterman held various engineering, gas supply, project development and supervision positions. He holds BS and MS degrees in Chemical Engineering from Montana State University. Mr. Waterman is a registered professional engineer in Montana and South Dakota.

Steve Luther **Protective Relaying** **Manager**

Mr. Luther joined the former Montana Power in 1976 and has held various positions throughout the Company including electric transmission and distribution planning, analysis, operations and maintenance; transmission and substation design and maintenance; protective relay maintenance, planning and design; and resource planning, He graduated from Montana State University with a Bachelor of Science in Electrical Engineering. He is a registered professional engineer in Montana.

Casey Johnston **System Operations** **Manager**

Mr. Johnston is presently the Manager, System Operations. Mr. Johnston graduated from Montana State University with a degree in Electrical Engineering. Mr. Johnston has filled engineering roles in electric transmission maintenance, distribution planning, and generation. He is a licensed Professional Engineer in Montana, and recently completed his masters' degree in project engineering and management.

Tom Vivian **Gas Operations** **Manager**

Mr. Vivian has 22 years of service with NorthWestern Energy, all of them in the natural gas transmission and storage business. Prior to his current position, he worked in various engineering capacities in Cut Bank and Butte. He oversees the department responsible for the day-to-day operations of the gas transmission and storage system, the gas SCADA system, measurement on the transmission system as well as Tier 1 and Tier 2 customers, and construction and maintenance of the metering and regulating equipment associated with the city gate stations. Mr. Vivian holds a Bachelor of Science and a Masters' of Science in Petroleum Engineering from Montana Tech and a Masters' of Science in Project Engineering and Management from

Montana Tech/Montana State. He is a registered professional engineer in Montana and South Dakota.